CLAIMS:

1. A method of manufacturing nanowires from semiconductor material, comprising the steps of

providing a patterned etching mask having openings on a surface of a substrate made of the semiconductor material, which openings have a substantially uniform pitch;

placing the substrate with the etching mask in a liquid etchant for the semiconductor material;

anodically etching so as to form substantially parallel pores with a pitch corresponding to the pitch of the openings in the etching mask at a current density such that the diameter of the pores becomes at least as great as the pitch of the pores, whereby nanowires are formed;

oxidizing a surface of the nanowires, whereupon said surface is removed by etching; and

removing the nanowires from the substrate by means of vibration,

characterized in that the anodic etching is carried out in a first time period and a second time period, which periods correspond to a first and a second region along the nanowires, such that etching takes place in the second period at a higher current density than in the first period so that the nanowires formed have a greater diameter in the first region than in the second region, with the result that the nanowires break off in the second region upon removal.

2. A method as claimed in claim 1, characterized in that the removal takes place in a bath wherein a dispersion of the nanowires is formed.

3. A method as claimed in claim 1, characterized in that the step of oxidation and removal of the surface of the nanowires is repeated a number of times.

4. A method as claimed in claim 1 or 3, characterized in that the anodic etching is carried out during a plurality of alternating first and second time periods so as to form a plurality of first and second regions which alternate along the lengths of the nanowires.

5. A method as claimed in claim 1, characterized in that the nanowires are provided with a layer of a desired material in the dispersion.

6. A method as claimed in claim 5, characterized in that the desired material is provided by means of a sol-gel process.

7. A method as claimed in claim 5 or 6, characterized in that the material is silicon dioxide to which a luminescent coloring agent is bound.

8. A dispersion of nanowires of a semiconductor material in a dispersing agent obtainable by the method as claimed in any one of the preceding claims.

9. A dispersion of nanowires of a semiconductor material in a dispersing agent, which nanowires are provided with a surface layer of a desired material.

10. A dispersion as claimed in claim 9, characterized in that the length of the wires lies in a range of between 0.3 and 1 μm.

11. A dispersion as claimed in claim 8 or 9, characterized in that the length of the wires is uniform within an error margin.

12. A method of manufacturing a device provided with nanowires on a substrate, in which method a dispersion of nanowires is provided on the substrate, characterized in that the dispersion as claimed in any one of the claims 7 to 10 is provided on the substrate.

13. An electronic device comprising a layer in which nanowires are dispersed, which nanowires have a predefined length distribution.